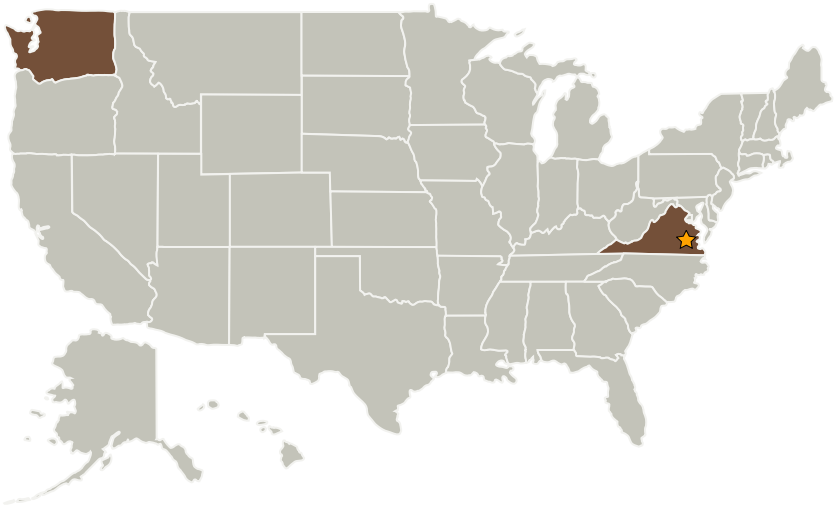
A Reliable Electronic Package for Space Exploration, Phase I

Completed Technology Project (2008 - 2008)

Project Introduction

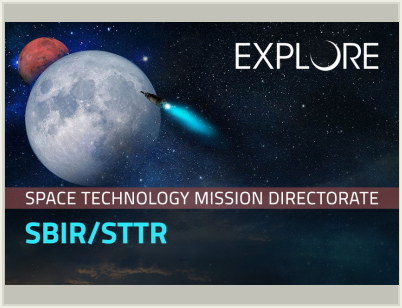
The proposed program will develop an hermetic, CTE matched, thermal shock resistant ceramic packaging technology that will facilitate the operation of Si and SiGe devices at extreme temperatures (-230ºC to 130ºC) encountered on the Moon and Mars. Processes to assemble the components into a hermetically sealed package will be identified and developed. Process and materials capability will be demonstrated by fabricating and testing a 12 or 28 pin single chip module test vehicle.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
Sienna Technologies, Inc.	Supporting Organization	Industry	Woodinville, Washington

Primary U.S. Work Locations	
Virginia	Washington



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Ender Savrun

Technology Areas

Primary:

- TX09 Entry, Descent, and Landing
  - TX09.4 Vehicle Systems
    - TX09.4.5 Modeling and Simulation for EDL